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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,886	01/18/2002	Seemant Choudhary	064731.0263	1721
5073 7590 07/14/2009 BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980				
EXAMINER				
BELLO, AGUSTIN				
ART UNIT		PAPER NUMBER		
2613				
NOTIFICATION DATE		DELIVERY MODE		
07/14/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/052,886

Applicant(s)

CHOUDHARY ET AL.

Examiner

Agustin Bello

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12,14-17,19,37,39-50,52 and 55-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12,14-17,19,37,39-50,52 and 55-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 12, 14-17, 19, 37, 39-45, 49, and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by Cho (Patent No. US 7,224,906 B2).

Regarding claim 12, 37, Cho teaches generating a polarized local signal based on receiver-side feedback (reference numeral 2097 in Figure 24); receiving an ingress traffic signal ((reference numeral 2099 in Figure 24) comprising a first signal and a second signal, the first and second signals having the same wavelength, having different polarizations, and being modulated based on different data (i.e. the output of the transmitter of Figure 8); combining the ingress traffic signal including the first signal and the second signal with the polarized local signal to generate a combined signal (reference numeral 302' in Figure 24); splitting the combined signal into a first split signal (reference numerals 308', 310' in Figure 24) and second split signal (reference numeral 312', 314' in Figure 24) using a polarization beam splitter (inherent in hybrid 302' in Figure 24); detecting the first split signal (reference numeral 316', 318' in Figure 24); detecting the second split signal (reference numeral 312', 314' in Figure 24), and converting the detected first split signal and second split signal into intended data streams (reference numeral C₁', C₂' in Figure 24).

Regarding claim 14, 40, 45, Cho teaches the method of Claim 12, wherein the polarization is circular (inherent in reference numeral 302' in Figure 24).

Regarding claim 15, 41, Cho teaches that the first split signal comprises a first component of the received signal (inherent in the use of 302' of Figure 24).

Regarding claim 16, 42, Cho teaches that the second split signal comprises a second component of the received signal that is orthogonally polarized (inherent in the use of 302' in Figure 24).

Regarding claim 17, 43, Cho teaches that the ingress traffic is optical (inherent).

Regarding claim 18, Cho teaches that the combined signal is split by a polarization beam splitter (reference numeral 302' in Figure 24).

Regarding claim 19, 49, Cho inherently teaches that the polarization of a first component of the ingress traffic signal is aligned to an axis of the polarization beam splitter (inherent in that separation takes place at the 302' in Figure 24).

Regarding claim 39, Cho teaches that system of claim 37, wherein the signal is received by an automatic polarization controller (inherent in 302' in Figure 24).

Regarding claim 44, Cho teaches the system of claim 37, wherein the local signal is provided by a continuous wave laser (column 24 lines 46-56).

Regarding claim 50, Cho teaches that the detecting means is a photodiode (reference numerals 316', 318', 320', 322' in Figure 24).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 46-48 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho.

Regarding claim 46, Cho differs from the claimed invention in that it fails to specifically teach that a quarter-wave plate controls the polarization of the system. However, the use of quarter-wave plates to control polarization is well known in the art. One skilled in the art would have been motivated to use a quarter-wave plate control the polarization of the system since they are readily available and relatively inexpensive. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ a quarter-wave plate as the polarization controllers of the system of Cho.

Regarding claims 47-48, Cho differs from the claimed invention in that it fails to specifically teach that the combiner is a half-mirror or a 3dB splitter. However, both types of combiners are well known in the art and readily available. One skilled in the art would have been motivated to employ wither one in order to meet a design requirement or to use what was available at the time. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to employ either a half-mirror or a 3dB splitter in the system of Cho.

Claim 52 recites a combination of individually rejected elements and is therefore rejected on the same grounds as stated above.

5. Claims 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho in view of Islam (Patent No. US 7,136,588 B1).

Regarding claims 55-57, Cho teaches or obviates the limitations of claims 12, 37, and 52, but differs from the claimed invention in that Cho fails to specifically teach a polarization mode

dispersion compensator operable to receive an optical traffic signal and to compensate the optical traffic signal for polarization mode dispersion. However, Islam teaches a polarization mode dispersion compensator (reference numeral 564 in Figure 8a) operable to receive an optical traffic signal and to compensate the optical traffic signal for polarization mode dispersion. One skilled in the art would have been motivated to include a polarization mode dispersion compensator operable to receive an optical traffic signal and to compensate the optical traffic signal for polarization mode dispersion in order to optimize the optical signal to noise ratio (column 22 lines 47-52 of Islam). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include a polarization mode dispersion compensator operable to receive an optical traffic signal and to compensate the optical traffic signal for polarization mode dispersion.

Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Primary Examiner
Art Unit 2613